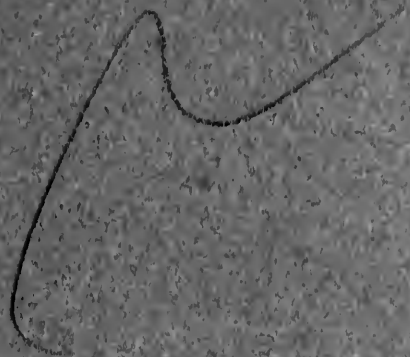
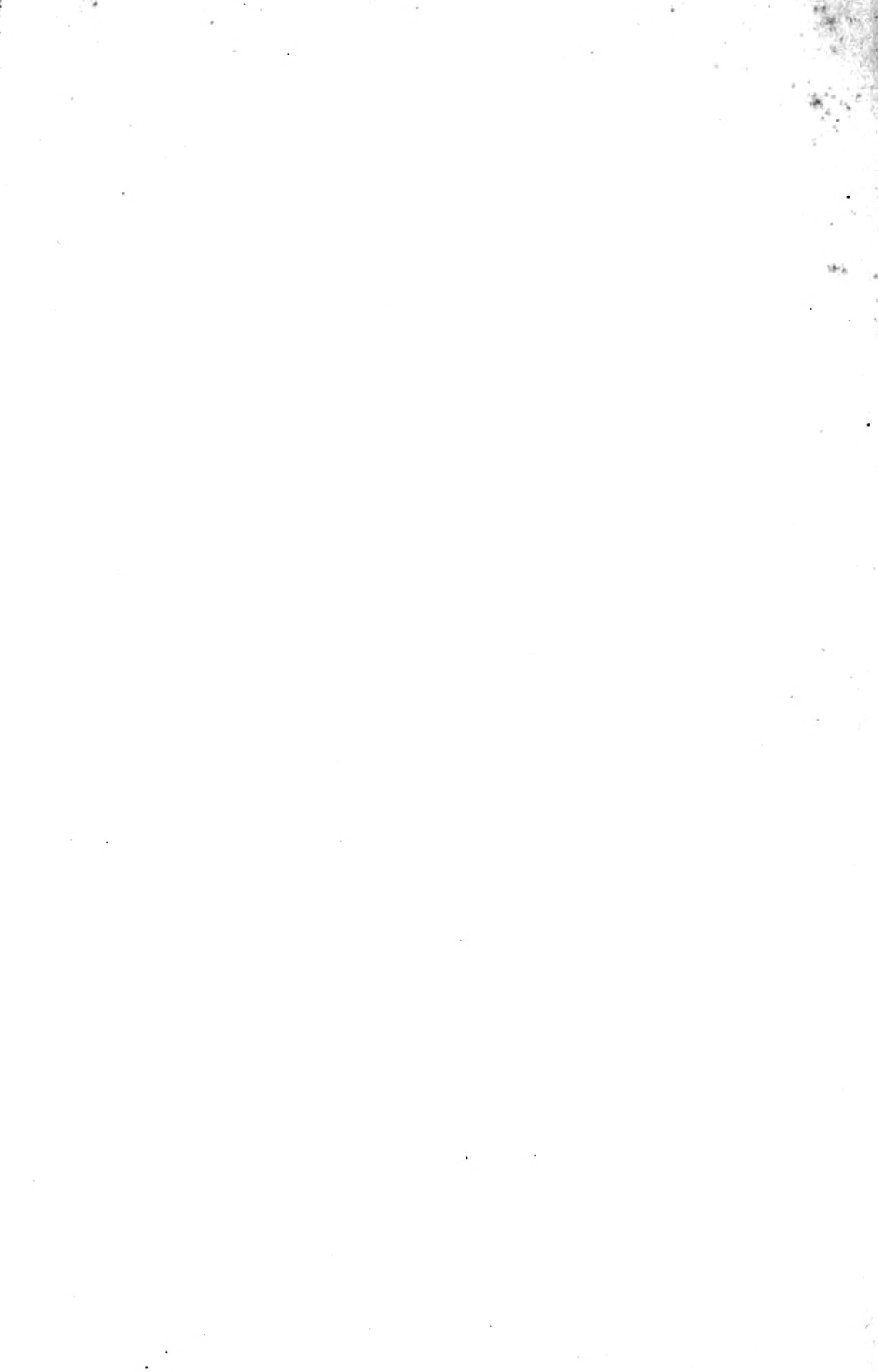






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# SCIENCE THE HANDMAID OF RELIGION

AN ADDRESS

*DELIVERED TO MEMBERS OF THE LAY HELPERS'  
ASSOCIATION, IN THE DIOCESE OF LONDON*

IN S. PAUL'S CATHEDRAL

BY

J. J. COXHEAD, M.A.

VICAR OF S. JOHN'S, FITZROY SQUARE

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*[This Address was one of a series given to members of the Lay Helpers' Association in the north-west chapel of S. Paul's, by the permission of the Dean and Chapter, to whom the Association has many reasons to be grateful for acts of kindness and courtesy. Some who heard it wished it to be printed. The writer, conscious of its deficiencies, is convinced of the soundness of the method of the argument, which is to show the harmony between the leading ideas of religion and the leading ideas of science.]*

## SCIENCE THE HANDMAID OF RELIGION

THE statement has often been made, perhaps more vaguely than is desirable, that science is the handmaid of religion. The expression seems to affirm that, in some way or another, science is expected to aid religion in her work in the world. But it does not appear to be clearly understood in what ways science may be expected to minister to religion. Rather, in this age, at any rate, religion and science have been regarded, not as friends, the one being content to keep the other in a subordinate position, but as jealous rivals and foes, like Euodias and Syntyche, before S. Paul reconciled them. Science has assumed a rough hectoring tone towards religion, or a patronising air no less disagreeable; while religion, unable to cope on equal intellectual terms with her adversary, has often, we fear, comported herself, not as the inherent strength of her position would justify her in doing, with calmness and dignity, but with petulance and anger; making

up for want of learning and logic with anathema and abuse.

I shall endeavour to show in this address (I know I shall do it most imperfectly) in what ways science is indeed the handmaid of religion; that is, how, in the common work they both have to perform in the world, science may be regarded as playing the humbler part in the same work, aiding, not superseding, religion in her work among men.

It will be necessary, however, first to point out that a very erroneous view has been taken of the office of science by those who have sought to be considered her best friends. Priding themselves on being considered practical, they have regarded science only as the means by which the physical conditions of men's lives may be bettered. Far be it from me to disparage the efforts of science in this respect. To increase the productiveness of the earth's surface, to ensure conditions of health and physical well-being for its inhabitants, to plan gigantic works by means of which communication between its most distant points is secured, to add in a thousand ways to the comfort and prosperity of mankind, are achievements which justly ensure for science our gratitude and admiration.

But the work of science does not end here. Man has a soul as well as body; or, if that language be considered inexact, man has intellectual wants as well as physical, and his happiness



cannot be considered as secured when his material necessities are satisfied, but when his mental and moral longings also have obtained the ends for which they seem to crave.

The proper end of science therefore is not anything practical. The end of science is an intellectual end. Practice belongs to art, which is the application of science. But the end and object of science is discovery; that is, the uncovering of something concealed. Science is but another name for knowledge; and knowledge is an end in itself. For as the body desires to be fed and warmed and clothed, and to enjoy conditions in which the healthy exercise of its functions may be permitted, so the soul desires knowledge; and when it has gained knowledge, it is, so far, happy and satisfied.

No doubt there have been, and there will be to a greater and greater extent, practical applications of the mathematical and physical sciences; but the mathematician and the physicist, as such, have no practical ends immediately in view. Their aim is knowledge, the knowledge of nature in her infinite variety, in her inflexible law, in her adaptation of means to ends, whether apparent or real, in her phenomenal and causal aspects. Nor can we doubt, that when men of science have in different ages, according to their varying lights, from Thales of Miletus, or probably from the time of the magicians of Egypt, thousands of years before Thales, to Tyndall of London, pursued the investigation of

nature, they have done so from a love of knowledge for its own sake, from an enthusiasm for the marvel and mystery and beauty of the world around them; from an insatiable craving of the intellectual faculties to comprehend the facts of the visible universe, even if they have surrendered the hope of discovering its cause. Science, then, in this point of view, is engaged in a spiritual work. Her office is not to make steam engines, but to investigate the laws of heat and motion, in order that the human mind may find an intellectual expression to these laws. The knowledge of these things is an end in itself; and when a new discovery is made, the human mind is conscious of having reached a further point in its history, of having gained a new joy, a fresh source of satisfaction and peace.

In claiming for science these spiritual functions, we consider her as engaged in a work analogous to that discharged by religion, for religion undoubtedly concerns the souls of men. In its subjective aspect the office of religion is to reveal to the mind the knowledge of God, to arouse in the heart emotions worthy of the nature of the Supreme Being, and to subdue the character to a condition proper to a dependent being, bound to the Creator by innumerable ties of gratitude and obedience. It is the belief of the Christian that the Supreme Being has revealed Himself to mankind chiefly in the person of His Son, the

Lord Jesus Christ, to whom the Holy Scriptures testify, and whom the Church worships and obeys. The end of religion is therefore the knowledge of God. Testifying its presence by beneficent acts, and by deeds of righteousness and love, its hidden spring is a fact of self-consciousness, the realising the existence and the majesty of God. Religion is knowledge; a knowledge operative, energetic, fruitful in activity, but nevertheless knowledge, a sense of certitude respecting God, and His relations to mankind.

It is undoubtedly true that under the name of religion and theology, a vast amount of useless verbiage has found its way into the world. No doubt, both Catholic and Puritan teachers have talked and written a great deal of nonsense; but when we look at Christian theology as a whole, we cannot but be impressed with its sublime wisdom, and its surpassing eloquence. We may appreciate it the more if we conceive it to have been lost.

Let us imagine the world to be deprived of the whole range of theological teaching, from Moses to, shall we say, Charles Kingsley, Rector of Eversley. We cannot but admit that in this case the human race would have been something altogether different from what it is now. In all probability that increase of knowledge in physical science, which the last three centuries have witnessed, was only rendered possible by the theo-

logical knowledge which had previously been acquired. But without assuming this, let us conceive the world deprived of the teaching of the fathers, the schoolmen, and the reformers. The writings of Augustine, the *Summa Theologiae* of Thomas Aquinas, the *Divina Commedia* of Dante, the *Paradise Lost*, the *Pilgrim's Progress*, the *Christian Year*, the Bible itself, all we suppose banished from the world. Can we conceive anything that would have taken their place? The loss of those religious treasures of the past would, we feel, have caused mankind to be absolutely bankrupt and beggared. And why so? Because religious belief and thought produce in the mind a consciousness of power and enlargement of aim, a sense of spiritual rank and dignity and hope, which only real knowledge can confer. In this point of view it has, though in a far higher degree, the same effect as the knowledge of physical science. A theological teacher who is real in his aims, leaves on the mind something akin to the impression left by the revealer of physical truth. To grasp a theological truth, as, for example, the truth of the Incarnation, produces something akin to the impression made when we have learnt a new fact or law in physics. The mind enjoys a sense of certainty, and rests therein. From this point of view we may consider religion and science as engaged in the same kind of work.

Now in many ways has the increased knowledge of physical science aided religious knowledge. We have space to indicate but a few of them.

I. Physical science has clearly shown the immensity of the universe; some men of science would call it the infinity of the universe. That which theology had affirmed before of God, that He was infinite, has, it has been thought, been proved in respect to the universe by the discoveries of science. The immense spaces between the fixed stars, their huge size, the innumerable quantity of those stars, which are revealed in ever increasing numbers by the telescope, as it is made to increase in star-defining power, point to an infinitude of the physical universe which illustrates physically what theologians have always asserted concerning the Divine nature.

The *κόσμος* of the Greek, the *mundus* of the Roman, was a small thing compared with the universe of the modern philosopher; but "the King eternal, immortal, invisible," of S. Paul, "the all-wise God," is still the same God of the Christian philosopher. Theology changes not; but physical science advances ideas more and more akin to those of theology. The universe, as we know it to-day, is more worthy of God as He was known in the time of S. Paul. And if we admit, in any sense, the axiom, that the universe considered as an effect must have had a cause, then we contend that the effect, as we know it now, is more worthy

of the Cause as He has always been known by His servants and worshippers.

We are using the word infinite here in its simple sense of boundless ; and we contend that modern physical science, in a manner utterly unknown in time past, is revealing a boundlessness of the universe, which corresponds with the dogmas of religion respecting the Divine nature. The work, as it is better known, is shown to reveal more and more clearly the character of the artificer.

II. Again, that which theologians have called the "fulness" of God, his *πλήρωμα*, seems to have its expression in the universe in a manner unknown to the ancients. For whereas it was certainly in former times the belief that there were certain empty parts of the universe, as the space, for example, between the earth and the moon and sun and stars, now it seems all but certain that a wonderful fluid pervades the whole of stellar space, a means of communication for the influence of light in its chemical, electrical, and vital effects ; that is, a vehicle of mysterious force exists not in some places only, but in all places. There is no emptiness in the world ; it is all fulness.

Thus our conception of the universe approximates to those conceptions of God which have all along held possession of the minds of men. Surely, as science raises the veil of the visible world in this manner, she may be regarded as the handmaid of religion, aiding, subordinately, religion in her

work of informing mankind, by giving breadth and scope to the conceptions of the human intellect, in filling the human heart with reverence and awe.

III. We also venture to think that the duration in time which modern physical science claims for the physical world, those vast periods which geological science predicates respecting the existence of this globe since it assumed anything like its present aspect, those still vaster æons which astronomical science asks for the formation of planetary systems from nebulous matter, are more in harmony with the theological conception of the eternity of God, than a world made just as we find it now, six thousand years ago. If religion tells us that God is eternal, science certainly aids us in grasping the idea, when it reveals that that small portion of the visible world of which we have any knowledge has endured for millions of ages.

IV. It is one of the favourite theories of that school of thought that would remove from the mind the idea of God, that matter contains in itself the properties by which vegetable and animal life have come into being. An organism, it is said, is the result of certain properties peculiar to certain kinds of matter, adapting themselves to an external environment. In virtue of these principles certain forms of vegetable and animal life are evolved from pre-existing forms. This is the celebrated doctrine of evolution. With-

out in any way committing ourselves to an adhesion to this doctrine, which, though in many respects shown to be probable, has not yet been proved, we may say that it confirms, rather than overthrows, what theology has asserted respecting the wisdom of God. For while it is the wisdom of a man to adapt some means to some ends, and he has most wisdom who adapts most means to the accomplishment of most good ends, we should see, supposing the doctrine to be true, all means adapted to all ends. From the atom, and that which precedes the atom, to man, the highest organism with which we are acquainted, we might regard each step as an end which all previous conditions were intended to bring about; and each end so brought about we might regard as a condition necessary to that which was to follow. In entertaining this conception of nature, we rather enhance, than depreciate, our conceptions of the wisdom of God.

No doubt theologians are rather to blame in that they had exalted miracle as something more worthy of our awe and admiration than the ordinary works of God. But what miracle can be more wonderful than the existence of the world; or in what respects could our idea of the wisdom of God be more exalted than by considering the whole sum of visible things as resulting from conditions which He formed when He laid the foundations of the universe, as consequences dependent on antecedents which He determined and foreknew?



One more illustration, and we conclude.

V. That which we are told respecting the indestructibility of force, or the conservation of energy, has its theological equivalent in the doctrine of the immanence of Deity. Matter does not lose its energy, though the energy be transmuted over and over again; for the simple reason, that He who doubtless by *some means* made matter the vehicle of force, continues to matter the properties with which He originally endowed it. If gravitation be a universal property of matter, the energy which matter possesses by reason of the attractive force which we call the force of gravitation must continue to exist while the matter exists.

The physicist tells us that no light, no heat, no electricity, no motion is ever lost; because if motion be a property of bodies under certain conditions, then the light and heat and electricity, which are modes of motion, will continue so long as motive force be supplied. If a thing has once had existence, why should it cease to exist? If motion be once given, what can take it away? Water may be poured from one vessel to another; it may become steam, vapour, gas, but its elementary particles continue the same.

Thus, if science tells us that the force of the universe is never destroyed, it simply corroborates the assertion of the theologian, that it cannot be destroyed, so long as God chooses it to

exist. Motion is the consequence of life. I move myself because I live; I am able to move other things because I live. In this sense the words of Pope are true :

“ All are but parts of one stupendous whole,  
Whose body Nature is, and God the soul ;  
That, *changed* through all, and yet in all the *same*,  
Great in the earth, as in th’ ethereal frame,  
Warms in the sun, refreshes in the breeze,  
Glowes in the stars, and blossoms in the trees,  
Lives through all life, extends through all extent,  
Spreads undivided, operates *unspent*,  
Breathes in our soul, informs our mortal part,  
As full, as perfect, in a hair as heart,  
As full, as perfect, in vile man that mourns,  
As the rapt seraph that adores and burns :  
To Him no high, no low, no great, no small :  
He fills, He bounds, connects, and equals all.”

In this sense the words of Paul may be interpreted : “ In Him,” by His will, through the means which He has supplied, “ we live and move and have our being.”

Nowhere, as far as we can see, do the deductions of science contravene the dogmas of religion. Rather, assuming these dogmas to be true, do we find both in the examples that we have alleged, and in many others, that science expresses her assent to them in terms almost borrowed from theology. We do not believe that the existence of God can be necessarily deduced from the teaching of physical science ; but assuming that His existence is proved, and it is the office of theology, not of science, to prove the existence of God, we contend

that physical science confirms, in many ways, the proof of the existence of God ; and, if so, the obligations and the consolations of religion.

Therefore, gentlemen, as helpers in the work of the Church, be not disconcerted by any hints or innuendos to which you may be compelled to listen as to the incompatibility of science and religion. The foundations of religion are as yet unmoved by any discovery of modern times. Nay, every fresh discovery reveals more and more of power and wisdom. And if in the arrangement of nature we see elements not only indicating goodness, but also indicating severity ; if there is not only life, but death ; not only pleasure, but pain, in the world, what is this but an illustration of the truth that this world is a creation made subject to vanity, “not willingly, but by reason of Him who hath subjected the same in hope, because the creature itself shall be delivered from the bondage of corruption into the glorious liberty of the children of God” ? Religion is concerned with God ; science is concerned with the universe ; and if in the universe science recognises indications of power, infinity, wisdom, goodness, severity, she bears witness to that which religion tells us concerning the nature and character of God.









